METAL PIPE (Steel)

Note: Attach Manufacturer's/Fabricator's Material Certifications

<table>
<tr><td>KIND OF MATERIAL</td><td rowspan="3">State of Connecticut
Department of Transportation
Bureau of Engineering & Highways
Report of Test of Metal Pipe
MAT 200 Revised - July 2003</td><td>Date</td><td rowspan="3">Project/Sample No.</td></tr>
<tr><td>SOURCE OF SUPPLY</td><td rowspan="2">Laboratory No.</td></tr>
<tr><td>LOCATION OF SOURCE OF SUPPLY</td></tr>
<tr><td>SAMPLE TAKEN FROM</td><td colspan="3" rowspan="10">Nominal Size of Pipe (inches/mm): _____
Thickness of Steel (inches/mm): _____
Type of Seam: _____
Thickness of Asphalt (inches/mm): _____
Paved Invert (inches/mm): _____
Type of Coupling Bands: _____
Thickness of Steel - Bands (inches/mm): _____
Width of Coupling Bands (inches/mm): _____
Corrugation or Helical Rib Size (inches/mm):_____
NOTE: Aluminized Steel Pipe does not require asphalt coating or paved invert</td></tr>
<tr><td>LOCATION OF</td></tr>
<tr><td>SAMPLED BY</td></tr>
<tr><td>DATE SAMPLED</td></tr>
<tr><td>USING AGENCY</td></tr>
<tr><td>QUANTITY PRESENTED</td></tr>
<tr><td>PURPOSE FOR WHICH MATERIAL WILL BE USED</td></tr>
<tr><td>SAMPLE RECEIVED</td></tr>
<tr><td>DATE MATERIAL WILL BE USED</td><td>Recommended For</td><td colspan="2">Remarks</td></tr>
<tr><td>WHERE MATERIAL WILL BE USED</td><td colspan="3"></td></tr>
<tr><td colspan="4">Director of Research
and Materials</td></tr>
</table>

MAT-201

ALUMINUM ALLOY CULVERT PIPE
PERFORATED ALUMINUM ALLOY PIPE FOR UNDERDRAINS

Note: Attach Manufacturer's/Fabricator's Material Certifications

KIND OF MATERIAL	**State of Connecticut** **Department of Transportation** **Bureau of Engineering and Highways** **Report of Test of Aluminum Pipe** **MAT 201 Revised- July 2003**	**Date**	**Project/Sample No.**
SOURCE OF SUPPLY			
LOCATION OF SOURCE OF SUPPLY		**Laboratory No.**	
SAMPLE TAKEN FROM	**Nominal Size of Pipe (inches/mm):** _____		
LOCATION OF	**Thickness of Sheet (inches/mm):** _____		
SAMPLED BY	**Type of Seam:** _____		
DATE SAMPLED	**Number of Rows of Perforations:** _____		
USING AGENCY	**Diameter of Perforations (inches/mm):** _____		
QUANTITY PRESENTED	**Height of Uppermost Rows of Perforations Above Bottom of Invert (inches/mm):** _____		
PURPOSE FOR WHICH MATERIAL WILL BE USED	**Chord Length of Unperforated Segments (inches/mm):** _____		
SAMPLE RECEIVED	**Type of Coupling Bands:** _____		
	Thickness of Sheet - Bands (inches/mm): _____		
	Width of Coupling Bands (inches/mm): _____		
	Corrugation or Helical Rib Size (inches/mm): _____		
DATE MATERIAL WILL BE USED	**Recommended For**	**Remarks**	
WHERE MATERIAL WILL BE USED			
Director of Research and Materials			

MAT-202

PERFORATED METAL PIPE (Steel)

Note: Attach Manufacturer's/Fabricator's Material Certifications

KIND OF MATERIAL **SOURCE OF SUPPLY** **LOCATION OF SOURCE OF SUPPLY**	**State of Connecticut** **Department of Transportation** **Bureau of Engineering & Highways** **Report of Test of Perforated Metal Pipe** **MAT 202 Revised- July 2003**	**Date** **Laboratory No.**	**Project/Sample No.**
SAMPLE TAKEN FROM **LOCATION OF** **SAMPLED BY** **DATE SAMPLED** **USING AGENCY** **QUANTITY PRESENTED** **PURPOSE FOR WHICH MATERIAL WILL BE USED** **SAMPLE RECEIVED**	**Nominal Size of Pipe (inches/mm):** _____ **Thickness of Steel (inches/mm):** _____ **Type of Seam:** _____ **Number of Rows of Perforations:** _____ **Diameter of Perforations (inches/mm):** _____ **Height of Uppermost Rows of Perforations Above bottom of Invert (inches/mm):** _____ **Chord Length of Unperforated Segment (inches/mm):** _____ **Type of Coupling Bands:** _____ **Thickness of Steel - Bands (inches/mm):** _____ **Width of Coupling Bands (inches/mm):** _____ **Corrugation or Helical Rib Size (inches/mm):** _____		
DATE MATERIAL WILL BE USED **WHERE MATERIAL WILL BE USED**	**Recommended For**	**Remarks**	
Director of Research and Materials			

MAT-203

CULVERT END

Note: Attach Manufacturer's/Fabricator's Material Certifications

KIND OF MATERIAL	**State of Connecticut** **Department of Transportation** **Bureau of Engineering & Highways** **Report of Test of Culvert End** **MAT 204 Revised- July 2003**	**Date**	**Project/Sample No.**
SOURCE OF SUPPLY			
LOCATION OF SOURCE OF SUPPLY		**Laboratory No.**	
SAMPLE TAKEN FROM	**Steel ( ) Aluminized Steel ( ) Aluminum ( )**		
LOCATION OF	**Nominal Size (inches/mm):** _____		
SAMPLED BY	**Thickness of Sheet (inches/mm):** _____		
DATE SAMPLED	**Thickness of Asphalt (inches/mm):** _____		
USING AGENCY	**Dimension "B" (inches/mm):** _____		
QUANTITY PRESENTED	**Dimension "H" (inches/mm):** _____		
PURPOSE FOR WHICH MATERIAL WILL BE USED	**Dimension "L" (inches/mm):** _____ **Dimension "W" (inches/mm):** _____ **Attachment System:** _____ **Edge Reinforcement:** _____		
SAMPLE RECEIVED	**Note: Aluminum/Aluminized Steel does not require asphalt coating.**		
DATE MATERIAL WILL BE USED	**Recommended For**	**Remarks**	
WHERE MATERIAL WILL BE USED			
Director of Research and Materials			

MAT-205 Non-cumulative RETAINED MASSES

					2 1/2″ 63 mm									
5″ 125 mm					2″ 50 mm									
3 1/2″ 90 mm					1 1/2″ 37.5mm									
1 1/2″ 37.5 mm					1″ 25 mm									
3/4″ 19 mm					3/4″ 19 mm									
1/4″ 6.3 mm					1/4″ 6.3 mm									
PAN					PAN									

1/4″ 6.3 mm					1/4″ 6.3 mm									
No. 10 2.0 mm					No. 10 2.0 mm									
No. 40 425 μm					No. 40 425 μm									
No. 100 150 μm					No. 100 150 μm									
No. 200 75 μm					No. 200 75 μm									
PAN					PAN									

KIND OF MATERIAL	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION BUREAU OF ENGINEERING & HWY OPERATIONS REPORT OF TESTS OF BANK RUN GRAVELS OR PROCESSED AGGREGATE MAT 205 Rev7-03				DATE	PROJECT / SAMPLE No.
SOURCE OF SUPPLY					LABORATORY No.	
LOCATION OF SOURCE OF SUPPLY	SIEVES	% PASS	SIEVES	% PASS	% WEAR & LAB NO.	MAXIMUM DENSITY
SAMPLE TAKEN FROM	5″ 125 mm		5″ 125 mm			
LOCATION OF	3 1/2″ 90 mm		3 1/2″ 90 mm		SOUNDNESS LOSS & LAB NO.	OPTIMUM MOISTURE
SAMPLED BY	2 1/2″ 63 mm		2 1/2″ 63 mm			
DATE SAMPLED	2″ 50 mm		2″ 50 mm		% LIQUID ASPHALT	
USING AGENCY	1 1/2″ 37.5 mm		1 1/2″ 37.5 mm		PLASTICITY & LAB NO. (PLASTIC OR NON-PLASTIC)	
QUANTITY REPRESENTED	1″ 25 mm		1″ 25 mm			
PURPOSE FOR WHICH MATERIAL WILL BE USED	3/4″ 19 mm		3/4″ 19 mm		*RECOMMENDED FOR:*	
	1/4″ 6.3 mm		1/4″ 6.3 mm			
DATE MATERIAL WILL BE USED	No. 10 2.0 mm		No. 10 2.0 mm		*REMARKS:*	
WHERE MATERIAL WILL BE USED	No. 40 425 μm		No. 40 425 μm			
SAMPLE RECEIVED	No. 100 150 μm		No. 100 150 μm			
	No. 200 75 μm		No. 200 75 μm			
Director of Research And Materials						

MAT-206

LT			SILT	
ORIGINAL MASS	gm		ORIGINAL MASS	gm
LESS WASHED MASS	gm		LESS WASHED MASS	gm
MASS OF SILT	gm		MASS OF SILT	gm
SILT	%		SILT	%

	RETAINED MASS	IND.RETAINED %	PASSING %	RETAINED %		RETAINED MASS	IND.RETAINED %	PASSING %	RETAINED %
5/8″ 16.0 mm					5/8″ 16.0 mm				
1/2″ 12.5 mm					1/2″ 12.5 mm				
3/8″ 9.5 mm					3/8″ 9.5 mm				
No. 4 4.75 mm					No. 4 4.75 mm				
No. 8 2.36 mm					No. 8 2.36 mm				
No. 16 1.18 mm					No. 16 1.18 mm				
No. 30 600 µm					No. 30 600 µm				
No. 50 300 µm					No. 50 300 µm				
No. 100 150 µm					No. 100 150 µm				
PAN					PAN				
TOTAL MASS			F.M.		TOTAL MASS			F.M.	

KIND OF MATERIAL	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION BUREAU OF ENGINEERING & HWY OPERATIONS REPORT OF TEST of SAND – MAT 206 Rev 7-03	DATE	Project/Sample Numbers
SOURCE OF SUPPLY		LABORATORY NO.	

LOCATION OF SOURCE OF SUPPLY	PASSING SIEVE	PERCENT	PERCENT	COLOR (GARDNER COLOR STANDARD) UNDER #11 ☐ OVER #11 ☐		
SAMPLE TAKEN FROM	1/2″ 12.5 mm			COMPRESSIVE STRENGTH (MPa)		
LOCATION OF	3/8″ 9.5 mm				7 day	28 day
SAMPLED BY	No. 4 4.75 mm			SAMPLE SAND		
DATE SAMPLED	No. 8 2.36 mm			OTTAWA SAND		
USING AGENCY	No. 16 1.18 mm			PERCENT OF OTTAWA		
QUANTITY REPRESENTED	No. 30 600 µm			RECOMMENDED FOR		
PURPOSE FOR WHICH MATERIAL WILL BE USED	No. 50 300 µm					
DATE MATERIAL WILL BE USED	No. 100 150 µm			REMARKS		
WHERE MATERIAL WILL BE USED	FINENESS MODULUS					
SAMPLE RECEIVED	SILT %					

Director of Research
and Materials

MAT-207

Non-cumulative RETAINED MASSES

NO. 3				NO. 6				NO. 8			
2 1/2″ 63 mm											
2″ 50 mm				1″ 25 mm				1/2″ 12.5 mm			
1 1/2″ 37.5 mm				3/4″ 19 mm				3/8″ 9.5 mm			
1 1/4″ 31.5 mm				1/2″ 12.5 mm				No. 4 4.75 mm			
1″ 25 mm				3/8″ 9.5 mm				No. 8 2.36 mm			
1/2″ 12.5 mm				No. 4 4.75 mm				No. 16 1.18 mm			
PAN				PAN				PAN			

NO. 4				NO. 67							
2″ 50 mm											
1 1/2″ 37.5 mm				1″ 25 mm							
1 1/4″ 31.5 mm				3/4″ 19 mm							
1″ 25 mm				1/2″ 12.5 mm							
3/4″ 19 mm				3/8″ 9.5 mm							
1/2″ 12.5 mm				No. 4 4.75 mm							
3/8″ 9.5 mm				No. 8 2.36 mm							
PAN				PAN				PAN			

KIND OF MATERIAL	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION BUREAU OF ENGINEERING & HWY OPERATIONS REPORT OF TEST OF COARSE AGGREGATE MAT 207 Revised July 2003					DATE	PROJECT/SAMPLE NUMBERS
SOURCE OF SUPPLY						LABORATORY No.	
LOCATION OF SOURCE OF SUPPLY	SQUARE MESH SIEVES	PERCENT PASSING				PERCENTAGE OF WEAR	
SAMPLE TAKEN FROM	2 1/2″ 63 mm					SOUNDNESS % LOSS	
LOCATION OF	2″ 50 mm						
SAMPLED BY	1 1/2″ 37.5 mm					RECOMMENDED FOR	
DATE SAMPLED	1 1/4″ 31.5 mm						
USING AGENCY	1″ 25 mm						
QUANTITY REPRESENTED	3/4″ 19 mm						
PURPOSE FOR WHICH MATERIAL WILL BE USED	1/2″ 12.5 mm					REMARKS	
	3/8″ 9.5 mm						
DATE MATERIAL WILL BE USED	No. 4 4.75 mm						
WHERE MATERIAL WILL BE USED	No. 8 2.36 mm						
	No. 16 1.18 mm						
SAMPLE RECEIVED	No. 100 150 µm						
Director of Research and Materials							

MAT-208

Rock Salt

sample weight	1/2 inch	% passing
ml $AgNO_3$ Sample	3/8 inch	% passing
Wt of standard	# 4	% passing
ml $AgNO_3$ Standard	# 8	% passing
% NaCl	# 30	% passing
Salt Wt	Pan	
Dry salt Wt	Project #	Sample #
% moisture	Date	Analyst

Specification Reference

Standard Specification _____
Supplemental Specification _____
Project Specification _____
Other _____

Person Accepting Technical Responsibility

Name: _____ **Title:** _____

AASHTO M 143
And ASTM D-632-94 Type 1
(Except sec. 9.1.2 and 11.2)

_____

Lab use only

Material #

Vendor #

Date Sampled

Destination Code

Material Quantity

Material Unit

Date Received

C or M

Dates **----**

State of Connecticut
Department of Transportation
Bureau of Engineering & Highways
Report of Test of Rock Salt
MAT 208 Rev. 9-03

Date

Laboratory No.

Project/ Sample No.

	Spec.	**Results**
% NaCl	**95 % min**	_____
Moisture	**2% max**	_____
% Passing ½ inch	**100**	_____
% Passing 3/8 inch	**95 – 100**	_____
% passing # 4	**20 – 90**	_____
% passing # 8	**10 – 60**	_____
% passing # 30	**0 – 15**	_____

Person Performing Test (initials) :_____

Recommended For	**Remarks**

Director of Research and Materials

MAT-209

Calcium Chloride

Project #	Sample #
Date	Analyst
Sample Wt.	
N $KmnO_4$	
ml $KmnO_4$	
CaCl Factor	
% CaCl	

Specification Reference

Standard Specification _____
Supplemental Specification _____
Project Specification _____
Other _____

Person Accepting Technical Responsibility

Name: _____ **Title:** _____

AASHTO M 144-86
And ASTM D 98-93

_____

_____

Lab use only

Material #

Vendor #

Date Sampled

Destination Code

Material Quantity

Material Unit

Date Received

Batch #

C or M

Dates ----

State of Connecticut
Department of Transportation
Bureau of Engineering & Highways
Report of Test of Calcium Chloride
MAT 209 Rev. 9-03

Date

Laboratory No.

Project/ Sample No.

Grade	**% CaCl**
Grade 1	**min. 77%**
Grade 2	**min. 90%**
Grade 3	**min. 94%**

% CaCl _____

Person Performing Test (initials) :_____

Recommended For	**Remarks**

Director of Research
and Materials

MAT-210

NON-DESTUCTIVE TEST OF HARDENED PC CONCRETE

Note: The Windsor Probe and Swiss Hammer are in-place, non-destructive, tests for indicating concrete strength. This test is for information only. Final acceptance is the responsibility of the District Engineer.

<table>
<tr><td>KIND OF MATERIAL</td><td rowspan="3">State of Connecticut
Department of Transportation
Bureau of Engineering & Highways
Report of Test of Non-Destructive PCC
MAT 210 Revised July 2003</td><td>Date</td><td rowspan="2">Project/Sample No.</td></tr>
<tr><td>SOURCE OF SUPPLY</td><td>Laboratory No.</td></tr>
<tr><td>LOCATION OF SOURCE OF SUPPLY</td><td></td></tr>
<tr><td>SAMPLE TAKEN FROM</td><td colspan="3" rowspan="8">Windsor Probe( ) Swiss Hammer( )

Producer of Concrete:_____

Project:_____Location:_____

Age of Concrete at Test:_____
CYL Numbers:_____
Average of Readings:_____
Readings in P.S.I/MPA:_____</td></tr>
<tr><td>LOCATION OF</td></tr>
<tr><td>SAMPLED BY</td></tr>
<tr><td>DATE SAMPLED</td></tr>
<tr><td>USING AGENCY</td></tr>
<tr><td>QUANTITY PRESENTED</td></tr>
<tr><td>PURPOSE FOR WHICH MATERIAL WILL BE USED</td></tr>
<tr><td>SAMPLE RECEIVED</td></tr>
<tr><td>DATE MATERIAL WILL BE USED</td><td>Recommended For

INFORMATION ONLY</td><td colspan="2">Remarks</td></tr>
<tr><td>WHERE MATERIAL WILL BE USED</td><td colspan="3"></td></tr>
</table>

MAT-211

Los Angeles Abrasion Test **Date of Test:**_____

	Pass. (inches/mm)	Ret. (inches/mm)	
Class A:	**1 ½ (37.5)**	**1 (25) -**	**+ 12 (1.7mm)**
	1 (25)	**¾ (19) -**	**+ 12 (1.7mm)**_____
	¾ (19)	**½ (12.5) -**	**Total of +12 (1.7mm)**
	½ (12.5)	**3/8 (9.5) -**_____	

Total Weight =

Total Wt. –

Minus +12 (1.7mm)_____

Class B:	**¾ (19)**	**½ (12.5) -**	**Total of –12 (1.7mm)**
	½ (12.5)	**3/8 (9.5) -**_____	

Total Weight =

Total of –12 (1.7mm) = _____ = _____ %
Total Weight

A: 1250 each required size – 12 spheres
B: 2500 each required size – 11 spheres

Dust =_____

Concrete Mix Coarse Aggregate Data

KIND OF MATERIAL	**State of Connecticut** **Department of Transportation** **Bureau of Engineering &Highways** **Report of Test of L. A. Abrasion** **MAT 211 Revised July 2003**	Date	IN-HOUSE TEST
SOURCE OF SUPPLY		Laboratory No.	
LOCATION OF SOURCE OF SUPPLY			Code 8
SAMPLE TAKEN FROM			
LOCATION OF	**Class**_____ **Wear, %** _____		
SAMPLED BY	**Soundness, % Loss** _____		
DATE SAMPLED			
USING AGENCY	**Material #**_____ **Vendor #**_____		
QUANTITY PRESENTED			
PURPOSE FOR WHICH MATERIAL WILL BE USED			
SAMPLE RECEIVED			
DATE MATERIAL WILL BE USED	Recommended For	Remarks	
WHERE MATERIAL WILL BE USED			

MAT-212 # Absorbent Compound

Gradation	Max.	Min.	Retained/ Results
# 6	12.00%		
# 30	99.00%	52.00%	
# 40	99.80%	73.00%	
# 60		90%	
Pan			

Specification Reference

Standard Specification _____
Supplemental Specification _____
Project Specification _____
Other _____

Person Accepting Technical Responsibility

Name: _____ **Title:** _____

Spec. A – A – 1979 A

State of Connecticut
Department of Transportation
Bureau of Engineering & Highways
Report of Absorbent Compound
MAT 212 Rev. 9-03

Date

Laboratory No.

Project/ Sample No.

Amount Retained	Spec.	Results
# 6	Max 12%	----------
# 30	52 - 99	----------
# 40	73 – 99.8	----------
#60	min 90	----------

Oil Absorbing Capacity (min 0.6 ml) ----------

Water Absorbing Capacity (min 0.7 ml) ----------

Solubility (max 1.5%) ----------

Density ----------

Person Performing Test (initials) :_____

Recommended For	Remarks

Director of Research and Materials

MAT- 213 MOISTURE/DENSITY

	State of Connecticut **Department of Transportation** **Bureau of Engineering and Highways** **Report of Test of Moisture/Density** **MAT 213 Revised July 2003**	**Date** **Laboratory No.**	**Project Sample No.**
	Maximum Density **(Kg/cu.m-Lbs/cu.ft)** _____ **Optimum Moisture** _____		
	Recommended For Information	**Remarks**	

MAT-214

State of Connecticut

Department of Transportation

Division of Materials Testing

MAT 214 Revised July 2003

Inspection of Portland Concrete Truck Mixers and Agitators

Company Location

Laboratory # :				
Inspection Date:				
Inspected by:				
Truck # :				
Mixer # :				
Manufacturer of Mixer:				
Type Mixer (Inclined):				
Manufacturer's Rated Capacity Gross Volume of Drum (CF):				
Manufacturer's Rated Capacity (CF)				
• For Mixing:				
• For Agitating:				
Max. Allowable volume/Mixing (63.25% of gross volume):				
Mixing Speed of Drum (RPM):				
Agitating Speed of Drum (RPM):				
Condition of Blades and Drum:				
Revolution Counter:				
Timer:				
Volume of Water Tank:				
Water-Measuring Device:				
Approved For (specify max. CY):				
• Truck - Mix:				
• Transit – Mix:				
• Central – Mix:				
Approved by:				
Date Approved:				

Remarks: _____

Notes: 1) The capacity of truck mixers shall be in accordance with the manufacturer's ratings, except that the maximum capacity shall not exceed 63.25% of the total volume of the drum. If manufacturer's ratings are less than this amount, manufacturer's ratings shall govern (M.06.01.03-b).

2) Use Manufacturer's ratings for maximum allowable agitating capacities.

MAT-215

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING AND HIGHWAY OPERATIONS
MAT 215 Revised July 2003

INSPECTION OF PORTLAND CEMENT CONCRETE DRY BATCH PLANT

INSPECTED BY:	INSPECTION DATE:
	/ /

PLANT		
NAME:	SERIAL NUMBER:	NUMBER OF BINS:
LOCATION:	CAPACITY:	CONTENTS OF BINS:
MANUFACTURER:	STATIONARY OR MOBILE:	ADEQUATE DISCHARGE CONTROL:

WEIGHING HOPPER	
NUMBER OF WEIGHING COMPARTMENTS:	FREE MOVEMENT:
ADEQUATE DISCHARGE GATES:	PROVISION FOR REMOVAL OF AGGREGATE OVERLOAD:

SCALES	*CEMENT*	*AGGREGATE*	*WATER*
DIAL			
BEAM			
DIGITAL/PRINTOUT			
INTERLOCKING			
FREE MOVEMENT			
DATE OF CONNECTICUT STATE SEAL			

MISCELLANEOUS SPECIFICATIONS	
METHOD OF ADDING ADMIXTURES	
ADMIXTURE CALIBRATION	
METHOD OF HANDLING FROZEN AGGREGATE	
CALIBRATION WEIGHT (10-50 LB)	
TYPE OF WATER	
WATER SAMPLE TAKEN	
CEMENT SOURCE	
COARSE AGGREGATE SOURCE	
FINE AGGREGATE SOURCE	
ADMIXTURE SOURCE	

REMARKS

LABORATORY NUMBER	
MATERIAL NUMBER	
VENDOR NUMBER	
APPROVED BY	
DATE APPROVED	

MAT-216

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING AND HIGHWAY OPERATIONS
MAT 216 Revised July 2003
INSPECTION OF PORTLAND CEMENT CONCRETE CENTRAL MIX PLANT

INSPECTED BY:	INSPECTION DATE:
	/ /

PLANT		
NAME:	SERIAL NUMBER:	NUMBER OF BINS:
LOCATION:	CAPACITY:	CONTENTS OF BINS:
MANUFACTURER:	STATIONARY OR MOBILE:	ADEQUATE DISCHARGE CONTROL:
XER		
TYPE:		CONDITION OF LINER:
MIXING TIME, seconds:	CONDITION OF BLADES:	CONDITION OF DRUM:

WEIGHING HOPPER	
NUMBER OF WEIGHING COMPARTMENTS:	FREE MOVEMENT:
ADEQUATE DISCHARGE GATES:	PROVISION FOR REMOVAL OF AGGREGATE OVERLOAD:

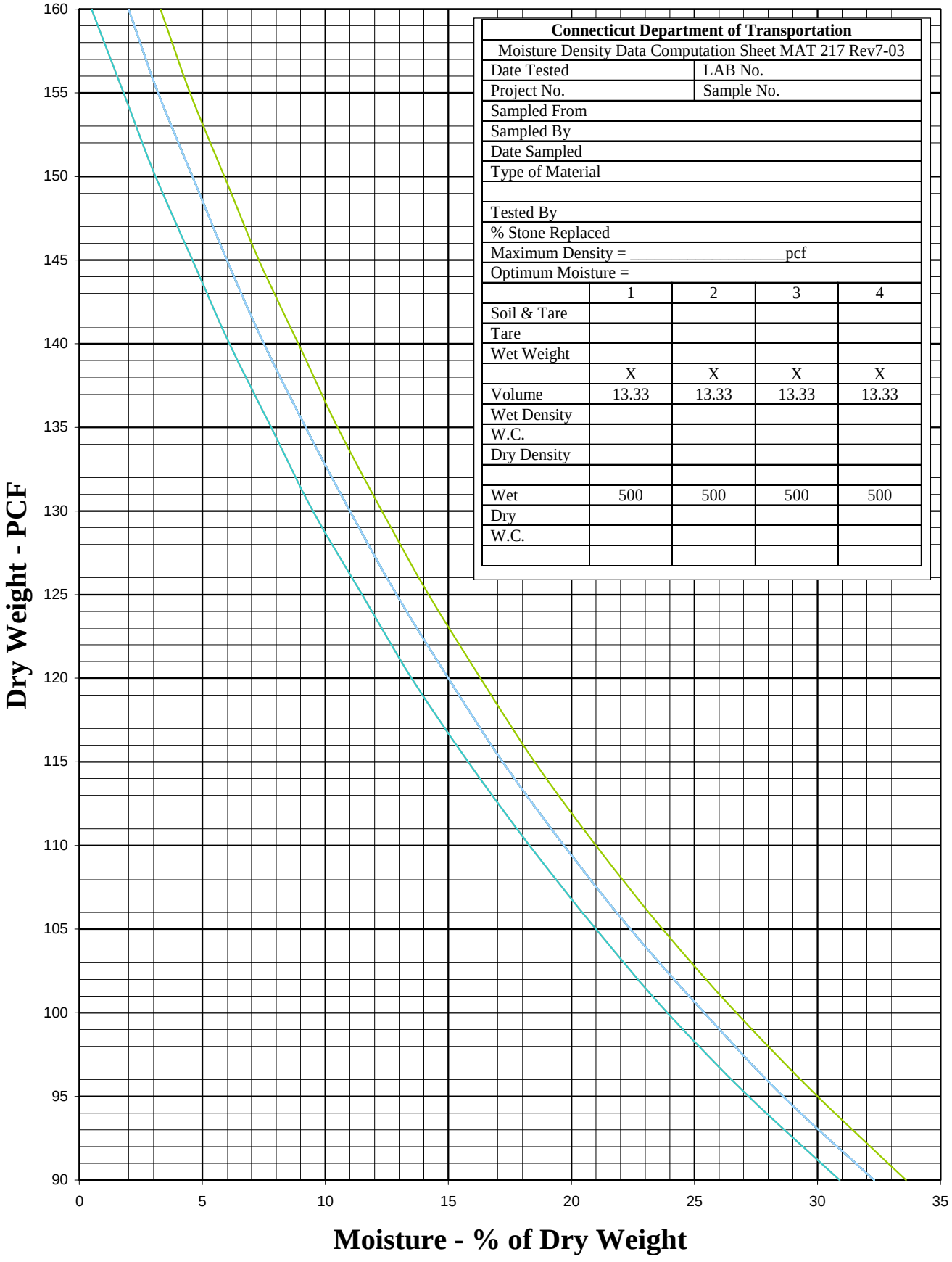
SCALES	*CEMENT*	*AGGREGATE*	*WATER*
DIAL			
BEAM			
DIGITAL/PRINTOUT			
INTERLOCKING			
FREE MOVEMENT			
DATE OF CONNECTICUT STATE SEAL			

MISCELLANEOUS SPECIFICATIONS	
METHOD OF ADDING ADMIXTURES	
ADMIXTURE CALIBRATION	
METHOD OF HANDLING FROZEN AGGREGATE	
CALIBRATION WEIGHT (10-50 LB)	
TYPE OF WATER	
WATER SAMPLE TAKEN	
CEMENT SOURCE	
COARSE AGGREGATE SOURCE	
FINE AGGREGATE SOURCE	
ADMIXTURE SOURCE	

REMARKS

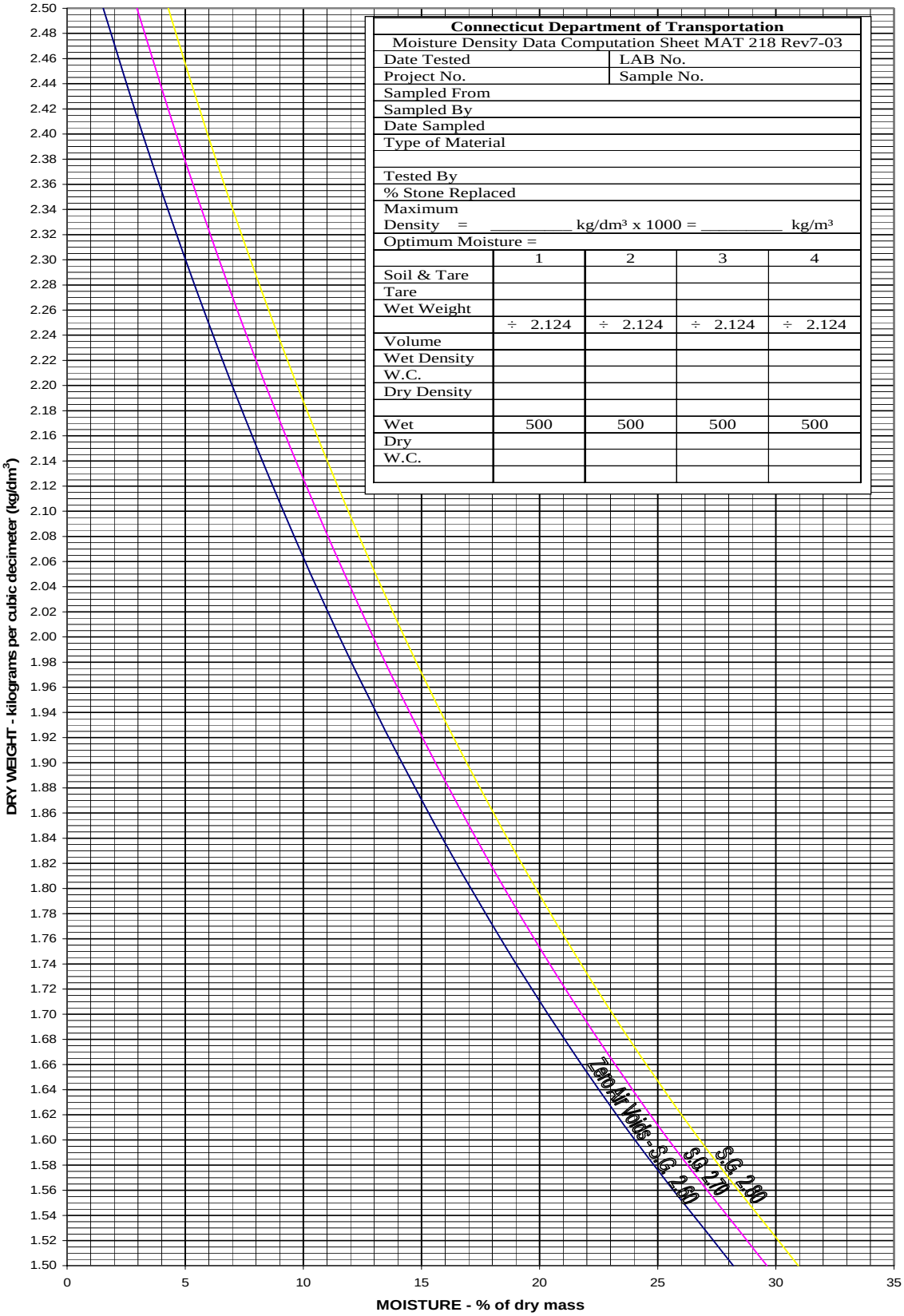
LABORATORY NUMBER	
MATERIAL NUMBER	
VENDOR NUMBER	
APPROVED BY	
DATE APPROVED	

MAT-217 Worksheet: Moisture/Density (Proctor)



Connecticut Department of Transportation				
Moisture Density Data Computation Sheet MAT 217 Rev7-03				
Date Tested		LAB No.		
Project No.		Sample No.		
Sampled From				
Sampled By				
Date Sampled				
Type of Material				
Tested By				
% Stone Replaced				
Maximum Density = _____pcf				
Optimum Moisture =				
	1	2	3	4
Soil & Tare				
Tare				
Wet Weight				
	X	X	X	X
Volume	13.33	13.33	13.33	13.33
Wet Density				
W.C.				
Dry Density				
Wet	500	500	500	500
Dry				
W.C.				

MAT-218 Worksheet: Moisture/Density (Proctor) - Metric



Connecticut Department of Transportation				
Moisture Density Data Computation Sheet MAT 218 Rev7-03				
Date Tested	LAB No.			
Project No.	Sample No.			
Sampled From				
Sampled By				
Date Sampled				
Type of Material				
Tested By				
% Stone Replaced				
Maximum Density = _____ kg/dm³ x 1000 = _____ kg/m³				
Optimum Moisture =				
	1	2	3	4
Soil & Tare				
Tare				
Wet Weight				
	÷ 2.124	÷ 2.124	÷ 2.124	÷ 2.124
Volume				
Wet Density				
W.C.				
Dry Density				
Wet	500	500	500	500
Dry				
W.C.				

MAT - 219
SPECIFIC GRAVITY AND ABSORBTION OF COARSE AGGREGATE – AASHTO T 85
DIVISION OF MATERIALS TESTING MAT 219 Revised July 2003

Source: _____ Location: _____ Date: _____

SAMPLE #		1	2	3
Mass of SSD Sample + Basket in Air				
Less Mass of Basket in Air				
Mass of SSD Sample	B			
Mass of Saturated Sample in Water + Basket in Water				
Less Mass of Basket in Water				
Mass of Saturated Sample in Water	C			
Mass of SSD Sample	B			
Less Mass of Saturated Sample in Water	C			
Loss in Mass (Volume of SSD Sample	B - C			

Mass of Oven-Dry Sample + Pan				
Less Mass of Pan				
Mass of Oven-Dry Sample in Air	A			

Mass of SSD Sample in Air	B			
Less Mass of Oven-Dry Sample	A			
Mass of Water (Volume of Permeable Voids)	B - A			

Mass of Oven-Dry Sample	A			
Less Mass of Saturated Sample in Water	C			
Loss in Mass (Volume of Oven-Dry Sample)	A - C			

Bulk Specific Gravity	$\frac{A}{B - C}$			
Bulk Specific Gravity (SSD Basis)	$\frac{B}{B - C}$			
Apparent Specific Gravity	$\frac{A}{A - C}$			
Absorbtion %	$\frac{B - A}{A} \times 100$			

MAT-220

Connecticut Department of Transportation-Division of Materials Testing

Fine Aggregate Soundness AASHTO T104 MAT 220 Rev. 7-03

Kind of Material:_____ **Source:**_____
Tech/Eng. Initials:_____
Date Sampled:_____ **Location:**_____ **Date Completed:**_____

Original Grading (Plus # 4)
Soak - Dry - Schedule

Seive In(mm)	Retained Mass	Pass & Ret. %	% Pass
			100
1/2 (12.5)			
3/8 (9.5)			
# 4 (4.75)			
#8 (2.36)			
#16 (1.18)			
#30 (600) µ			
#50 (300) µ			
Totals		100	

Notes:

Date in Sol.	Date	Date in oven

Grading of Original Sample

Pass	Ret. On	
3/8 (9.5)	# 4 (4.75)	%
# 4 (4.75)	#8 (2.36)	%
#8 (2.36)	#16 (1.18)	%
#16 (1.18)	#30 (600)µ	%
#30 (600) µ	#50 (300) µ	%

Total 100

(required sample not less than 100g for each size)

Passing	Retained	Actual Mass	Mass Before Test Gms.	Mass After Test Gms.	Loss in Gms.	Loss in %	Grading of Orig. Sample	Weighted Average	%
3/8 (9.5)	# 4 (4.75)								
# 4 (4.75)	#8 (2.36)								
#8 (2.36)	#16 (1.18)								
#16 (1.18)	#30 (600)µ								
#30 (600)µ	#50 (300) µ								

MAT-221 **Connecticut Department of Transportation-Division of Materials Testing**

Coarse Aggregate Soundness AASHTO T104 MAT 221 Rev. 7-03

Kind of Material:_____ **Source:**_____

Tech/Eng. Initials:_____

Date Sampled:_____ **Location:**_____ **Date Completed:**_____

Original Grading (Plus # 4)
Soak - Dry - Schedule

Seive In(mm)	Retained Mass	Pass & Ret. %	% Pass
			100
2 ½ (63)			
2 (50)			
1 ½ (37.5)			
1 (25)			
3/4 (19)			
1/2 (12.5)			
3/8 (9.5)			
# 4 (4.75)			
Totals		100	

Sample Sizes for Original Grading

#	lbs. (kg)
#	lbs. (kg)
#	lbs. (kg)
#	lbs. (kg)
Total	lbs. (kg)

Date in Sol.	Date	Date in oven

Grading of Original Sample

Pass	Ret. On	
2 ½ (63)	1 ½ (37.5)	%
1 ½ (37.5)	3/4 (19)	%
3/4 (19)	3/8 (9.5)	%
3/8 (9.5)	# 4 (4.75)	%

Total 100

(Required Sample Sizes)

Sieve Size	Not Less Than %	Consisting of Orig. Sample	Actual Weighted Average %	Mass Before Test Gms.	Mass After Test Gms.	Loss in Gms.	Loss in Grading of %		
2 ½ to 1 ½ (63) (37.5)	5000	3000 2 (50) 2000 1½ (37.5)							
1 ½ to ¾ (37.5) (19)	1500	1000 1 (25) 500 ¾ (19)							
¾ to 3/8 (19) (9.5)	1000	670 ½ (12.5) 330 3/8 (9.5)							
3/8 to # 4 (9.5) (4.75)	300	300 # 4 (4.75)							

MAT-222

CONNECTICUT DEPARTMENT OF TRANSPORTATION
DIVISION OF MATERIALS TESTING
ASSURANCE REPORT: FIELD TESTING PERSONNEL AND EQUIPMENT MAT 222 Rev. 7-03

PROJECT #: _____ DATE: _____

LOCATION: _____

CONSULTANT OR STATE INSPECTION_____

NAME (S) OF INSPECTOR (S), CERTIFICATIONS (NETTCP, ACI, ETC.), AND CERTIFICATION #'S

_____
_____
_____

LIST CONCRETE AND OTHER TESTING EQUIPMENT ON SITE

_____
_____
_____
_____
_____

AIR METER CALIBRATION DATE_____

REMARKS/OBSERVATIONS_____
_____
_____
_____
_____
_____
_____

FORM COMPLETED BY _____ DISTRICT LAB_____

MAT-223

CONNECTICUT DEPARTMENT OF TRANSPORTATION
DIVISION OF MATERIALS TESTING
RECYCLED/RECLAIMED MATERIAL CERTIFICATION
PROGRAM ASSURANCE REPORT MAT 223 Rev. 7-03

Date sample taken:
Date this report completed:
Recycled/reclaimed producer:
Location of producer:

Producer testing lab & location:
DOT testing lab & location:
Sample taken by: Initials:
Sample witnessed by: Initials:

SAMPLE TAKEN FROM (CHECK ONE)

( ) stockpile ( ) belt ( ) jobsite / other

TYPE OF ASSURANCE TEST (CHECK ONE)

( ) Random sample taken at producers stockpile or belt by District Laboratory personnel.

- Did this sample meet Department of Environmental Protection Remediation Standard Regulations ?

  ( ) yes ( ) no

- Attach copy of environmental test of random sample to this report.

( ) Split sample test. Sample taken by producer split in field for assurance testing and witnessed by District Laboratory personnel.

- Did both the producers sample and the Assurance Sample meet Department of Environmental Protection Remediation Standard Regulations ?

  ( ) yes ( ) no

- Attach copies of both environmental tests of to this report.

Briefly describe producers procedure for storing/stockpiling materials represented by environmental testing. (Ex., quantity of material stockpiled, tested, approved, then shipped to Department Projects)

_____

_____

_____

Comments / explanations / corrective actions:

_____

_____

_____

MAT-224

CONNECTICUT DEPARTMENT OF TRANSPORTATION
DIVISION OF MATERIALS TESTING
ASSURANCE REPORT: PLASTIC PC CONCRETE
MAT 224 Rev. 7-03

DATE		PROJECT NUMBER	
CLASS OF CONCRETE		TOWN	
TRUCK NUMBER		CONTRACTOR	
CYLINDER NUMBER		CONCRETE PRODUCER	
MIX TEMPERATURE		LOCATION/ STATION	

BATCH WEIGHTS PER CUBIC YARD								
	CEMENT lb.	OTHER _____ lb.	SAND + ____% Moisture lb.	STONE _____ lb.	STONE _____ lb.	STONE _____ lb.	TOTAL MIXING WATER lb.	TOTAL WEIGHT lb.
ACTUAL								
MIX DESIGN								
TOLERANCE	± 1%	± 1%	± 2%	± 2%	± 2%	± 2%	± 1% (Central Mix)	

ENTRAINED AIR				SLUMP TEST		
TIME TAKEN	AIR-ENTRAINING AGENT	AMOUNT USED PER BATCH	% AIR	TIME TAKEN	TOTAL WATER PER BATCH (gal.)	AMOUNT OF SLUMP

UNIT WEIGHT					
		-	=	÷	=
TIME TAKEN	WEIGHT OF MEASURE & SAMPLE lb.	WEIGHT OF MEASURE lb.	NET WEIGHT OF CONCRETE lb.	VOLUME OF MEASURE (ft^3)	UNIT WEIGHT lb./ ft^3

YIELD							
		÷	=	÷	=	÷	=
TIME TAKEN	TOTAL BATCH WEIGHT lb.	UNIT WEIGHT lb./ ft^3	YIELD PER BATCH (ft^3 / batch)	BATCH SIZE (y^3)	YIELD PER CUBIC YARD (ft^3 / y^3)		RELATIVE YIELD
						27	
						27	

Witnessed By (Print Name) _____ Project Inspector (Print Name) _____

Signature _____ Signature _____

MAT-225

CONNECTICUT DEPARTMENT OF TRANSPORTATION
OFFICE OF RESEARCH AND MATERIALS
DIVISION OF MATERIALS TESTING

ASSURANCE REPORT: PLASTIC PC CONCRETE (METRIC)

MAT 225 Rev. 7-03

DATE		PROJECT NUMBER	
CLASS OF CONCRETE		TOWN	
TRUCK NUMBER		CONTRACTOR	
CYLINDER NUMBER		CONCRETE PRODUCER	
MIX TEMPERATURE		LOCATION/ STATION	

BATCH MASS PER CUBIC METER

	CEMENT kg	OTHER _____ kg	SAND + ____% Moisture kg	STONE _____ kg	STONE _____ kg	STONE _____ kg	TOTAL MIXING WATER kg	TOTAL MASS kg
ACTUAL								
MIX DESIGN								
TOLERANCE	± 1%	± 1%	± 2%	± 2%	± 2%	± 2%	± 1% (Central Mix)	

ENTRAINED AIR

TIME TAKEN	AIR-ENTRAINING AGENT	AMOUNT USED PER BATCH	% AIR

SLUMP TEST

TIME TAKEN	TOTAL WATER PER BATCH (L)	AMOUNT OF SLUMP

UNIT MASS

		-	=	÷	=
TIME TAKEN	MASS OF MEASURE & SAMPLE kg	MASS OF MEASURE kg	NET MASS OF CONCRETE kg	VOLUME OF MEASURE (m^3)	MASS PER CUBIC METER kg / m^3

YIELD

		÷	=	÷	=
TIME TAKEN	TOTAL MASS OF BATCH kg	MASS PER CUBIC METER kg / m^3	YIELD PER BATCH (m^3 / batch)	BATCH SIZE (m^3)	RELATIVE YIELD

Witnessed By (Print Name)

Signature

Project Inspector (Print Name)

Signature

MAT-226

	State of Connecticut **Department of Transportation** **Bureau of Engineering & Highways** **Report of Project Field Inspection** **MAT 226 Revised July 2003**	**Date** **Laboratory No.**	**Project/ Sample No.**
	The subject material has been field tested by project personnel and was found to be in accordance with specifications.		
	Recommended For	**Remarks**	
	Director of Research and Materials		

MAT-227

Fiber Mulch

Moisture sample wt	Crucible wt
oven dry wt	Crucible & sample
Moisture content	crucible & ash
pH	% organics
Project #	Sample #
Date	Analyst

Specification Reference

Standard Specification _____

Supplemental Specification _____

Project Specification _____

Other _____

Person Accepting Technical Responsibility

Name: _____

Title: _____

Form 814 A and 815 M.13.05 - 3	**State of Connecticut Department of Transportation Bureau of Engineering & Highways Report of Test of Fiber Mulch MAT 227 Rev. 9-03**	**Date** / **Laboratory No.**	**Project/ Sample No.**
	pH _____ Moisture _____ % Organics _____ **Person Performing Test (initials) :**_____		
	Recommended For	**Remarks**	
Director of Research and Materials			

MAT-228 Glass Beads

Grams	% Passing	Moisture Resistance
# 20		Imperfect Wt
# 30		Round Wt
# 40		% perfects
# 50		Refractive index
# 80		Date
# 100		Analyst
Pan		Project #
Totals		Sample #

Specification Reference
Standard Specification _____
Supplemental Specification _____
Project Specification _____
Other _____

Person Accepting Technical Responsibility

Name: _____ **Title:** _____

AASHTO M 247 – 81
Type 1 and Type 2 Gradation
Gradation – ASTM D 1214
Roundness – ASTM D 1155
Refractive Index

State of Connecticut
Department of Transportation
Bureau of Engineering & Highways
Report of Test of Glass Beads
MAT 228 Rev. 9-03

Date

Laboratory No.

Project/ Sample No.

Lab use only

Material #

Vendor #

Date Sampled

Destination Code

Material Quantity

Material Unit

Date Received

Batch #

C or M

Dates ----

% Passing	Type 1	Type2	Results
# 20	100	----	----------
# 30	75 – 95	100	----------
# 40	-----	90 – 100	----------
# 50	15 – 35	50 - 75	----------
# 80	-----	0 - 5	----------
# 100	0 – 5	----	----------
% Perfect	> 70%		----------
Moisture Resistance			----------
Refractive Index	> 1.50		----------

Person Performing Test (initials) :_____

Recommended For	Remarks

Director of Research and Materials

MAT-229 Visi Beads

	% Retained	Project #
# 10		Sample #
# 12		Date
# 14		Analyst
# 16		
# 18		
# 20		
pan		

Specification Reference
Standard Specification _____
Supplemental Specification _____
Project Specification _____
Other _____

Person Accepting Technical Responsibility

Name: _____ **Title:** _____

Reference File # 199 – C
Grading B

_____

Lab use only

Material #

Vendor #

Date Sampled

Destination Code

Material Quantity

Material Unit

Date Received

C or M

Dates ----

State of Connecticut
Department of Transportation
Bureau of Engineering & Highways
Report of Test of Visi Beads
MAT 229 Rev. 9-03

Date

Laboratory No.

Project/ Sample No.

% Retained	Specs.	Results
#10	0	----------
# 12	0 – 5	----------
# 14	5 – 20	----------
# 16	40 – 80	----------
#18	10 – 40	----------
# 20	0 – 5	----------
Pan	0 – 2	----------

Person Performing Test (initials) :_____

Recommended For	Remark

Director of Research and Materials

MAT-230 Water

Appearance	Color
pH	Water Factor
ml Silver Nitrate	Chlorides
Project #	Sample #
Date	Analyst

Specification Reference

Standard Specification _____
Supplemental Specification _____
Project Specification _____
Other _____

Person Accepting Technical Responsibility

Name: _____ **Title:** _____

State of Connecticut
Department of Transportation
Bureau of Engineering & Highways
Report of Test of Water
MAT 230 Rev. 9-03

Date

Laboratory No.

Project/ Sample No.

Appearance ----------
Color ----------
pH ----------
Chlorides ----------

Person Performing Test (initials) :_____

Recommended For	**Remarks**

Director of Research and Materials

MAT-231 TCLP / Total Lead

Gradation	Project #
# 12	Sample #
# 16	Date
# 40	Analyst
# 50	
# 80	
Pan	

Specification Reference

Standard Specification _____
Supplemental Specification _____
Project Specification _____
Other _____

Person Accepting Technical Responsibility

Name: _____ **Title:** _____

State of Connecticut
Department of Transportation
Bureau of Engineering & Highways
Report of Test of TCLP
MAT 231 Rev. 9-03

Date

Laboratory No.

Project/ Sample No.

Gradation	**Results**
# 12	_____
#16	_____
# 40	_____
# 50	_____
# 80	_____
Pan	_____

Person Performing Test (initials) :_____

Recommended For	**Remarks**

Director of Research and Materials

MAT-232

TOP SOIL

Sample Weight	pH
Hydrometer Reading	Temperature
Beaker	Beaker & Sand
Crucible	Crucible
Crucible & Sample	Crucible & Sample
Crucible & Ash	Crucible & Ash
% Organics	% Organics
% Sand	% Silt
% Clay	Texture
Project #	Sample #
Date	Analyst

Specification Reference
Standard Specification _____
Supplemental Specification _____
Project Specification _____
Other _____

Person Accepting Technical Responsibility

Name: _____ **Title:** _____

Forms
814, 814 A, and 815
M.13.01

State of Connecticut
Department of Transportation
Bureau of Engineering & Highways
Report of Test of Top Soil
MAT 232 Rev. 9-03

Date

Laboratory No.

Project/ Sample No.

Texture _____

% Silt _____

% Clay _____

% Sand _____

% Organics (6 to 20%) _____

pH _____

Tons of Lime / Acre _____

Person Performing Test (initials) :_____

Recommended For	**Remarks**

Director of Research
and Materials

MAT-233 Black Enamel

SCOSITY@77^{O}F	RY HARD	NENESS OF GRIND
OLOR	RY OPACITY	OTAL SOLIDS,% BY WIEGHT
KINNING	DOR	ULL HARDNESS
LEXIBILITY	$_2$O RESISTANCE & % RETAINED	PECULAR GLOSS@60
WT/GAL@77^{O}F	% PIGMENTS BY WT _____ _____ _____ _____ _____ _____	ON VOLATILE _____ _____ _____ _____ _____ _____

Specification Reference

Specification _____
Supplement Specification _____
Project Specification _____
Others _____
Person Accepting Standard Technical Responsibility
Name: _____ Title: _____

Reference File No. 25-G

Material #

Vendor #

Date Sampled

Destination Code

Material Quantity

Material Unit

Date Received

Batch #

C or M

Dates ----

State of Connecticut
Department of Transportation
Bureau of Engineering & Highways
Report of Test of Black Enamel
MAT 233 Rev. 9-03

Date

Laboratory No.

Project/ Sample No.

Viscosity (67-77) _____ Color _____

Wt/gal (7.5 min) _____ Dry hard(8 Hrs max) _____

% Pigment by Wt_____ Setting and drying time _____

Volatile matter in vech(55 max) _____ Flexibility _____

Specular gloss(85 min) _____ H_2O resistance & % retained _____

Fineness of grind(7 min) _____ Dry opacity(0.99 min) _____

Non volatile _____ Odor _____

Skinning _____

Person Performing Test (initials)
:_____

Recommended For

Remarks

Director of Research and Materials

MAT-234 Orange Enamel

VISCOSITY@77^{O}F	GAS RESISTANCE & % RETAINED	FINENESS OF GRIND	DRY HARD
DUST FREE	VOLATILE MATTER IN VECH	VEHICLE % WT	DRY OPACITY
RECOATING	S.P RETAINED AFTER BAKING	FULL HARDNESS	ODOR
FLEXIBILITY	H_2O RESISTANCE & % RETAINED	SPECULAR GLOSS@60	SKINNING
WT/GAL@77^{O}F	% PIGMENTS BY WT _____ _____ _____ _____ _____ _____	NON VOLATILE _____ _____ _____ _____ _____ _____	COLOR

Specification Reference
Standard Specification _____ Supplement Specification_____
Project Specification_____ Others _____
Person Accepting Technical Responsibility Name:_____ Title:_____

Reference File No. 104-0

Material #

Vendor #

Date Sampled

Destination Code

Material Quantity

Material Unit

Date Received

Batch #

C or M

Dates ----

State of Connecticut
Department of Transportation
Bureau of Engineering & Highways
Report of Test of Orange Enamel
MAT 234 Rev. 9-03

Date

Laboratory No.

Project/ Sample No.

Viscosity (75-85) _____ Dust free(1 Hr max) _____ color _____

Wt/gal (8 min) _____ Dry hard(8 Hrs max) _____

% Pigment by Wt(16 min) _____ Full hardness(48 Hrs max) _____

Volatile matter in vech(55 max) _____ Flexibility _____

Specular gloss(85 min) _____ H_2O resistance & % retained _____

S.P retained after baking _____ Gas resistance & % retained _____

Fineness of grind(6 min) _____ Dry opacity(0.92 min) _____

Vehicle % wt(84 Hrs max) _____ Recoating _____

Non volatile _____ Odor _____ Skinning _____

Person Performing Test (initials)
:_____

Recommended For

Remarks

Director of Research and Materials

MAT-235 White & Yellow Fast Dry, Solvent Based Pavement Markings

Color (Fed. 595 – 33538)	**Dry times** (ASTM D 711)	**% Pigment** (ASTM D 3720)
Contrast Ratio (Fed. Test 141-4121))	**Direct Reflect.** (Fed. Ref. 141-6121)	1 _____ (100) =
Viscosity @ 77 (ASTM D 562)	**Weight /Gal** (ASTM D 1475)	2 _____ (100) =

Specification Reference

Standard Specification _____ **Supplemental Specification** _____

Project Specification _____ **Other** _____

Person Accepting Technical Responsibility

Name: _____ Title: _____

M.07.20

Material #

Vendor #

State of Connecticut
Department of Transportation
Bureau of Engineering & Highways
Report of Test of White & Yellow Fast Dry Solvent Based Pavement Markings
MAT 235 Rev. 9-03

Date

Laboratory No.

Project/ Sample No.

	White	Yellow	
Viscosity	**80 – 100 KU**	**80 – 100 KU**	_____
Dry Time	**- 3 min.**	**3 min.**	_____
Direct Reflectance	**85% +**	**50 % +**	_____
Color		**Visual**	_____
Contrast Ratio	**0.96 +**	**0.96 +**	_____
Weight/Gal	**11.8 +**	**11.8 +**	_____
% Pigment	**55% +**	**55% +**	_____

Person Performing Test (initials) :_____

Date Sampled

Destination Code

Material Quantity

Material Unit

Date Received

Batch #

C or M

Dates ----

Recommended For	**Remarks**

Director of Research and Materials

MAT-236 White & Yellow Regular Dry Solvent Based Pavement Markings

Weight/Gal (ASTM D 1475)	**Viscosity @ 77** (ASTM D 562)	**% Pigment** (ASTM D 3720)
Direct Reflect. (Fed. Ref. 141-6121)	**Contrast Ratio** (Fed.Test 141-4121)	**1** _____ **(100) =**
Dry times (ASTM D 711)	**Color** (Fed. 595 – 33538)	**2** _____ **(100) =**

Specification Reference

Standard Specification _____ **Supplemental Specification** _____

Project Specification _____ **Other** _____

Person Accepting Technical Responsibility

Name: _____ **Title:** _____

M.07.20 **Material #** **Vendor #**	**State of Connecticut** **Department of Transportation** **Bureau of Engineering & Highways** **Report of White & Yellow Regular Dry Solvent Based Pavement Markings** **MAT 236 Rev. 9-03**	**Date** **Laboratory No.**	**Project/ Sample No.**

	White	Yellow	
Date Sampled			
Viscosity	**70 – 80 KU**	**70 – 80 KU**	_____
Destination Code			
Dry Time	**- 15 min.**	**15 min.**	_____
Material Quantity			
Direct Reflectance	**85% +**	**50 % +**	_____
Material Unit			
Color	**Visual**	**Visual**	_____
Date Received			
Contrast Ratio	**0.96 +**	**0.96 +**	_____
Batch #			
Weight/Gal	**12.8 +**	**11.4 +**	_____
C or M			
% Pigment	**50% +**	**50% +**	_____

Person Performing Test (initials) :_____

Dates ----	**Recommended For** / **Remarks**

Director of Research and Materials

MAT-237 White & Yellow Airport Solvent Based Paint

Viscosity @ 77 (ASTM D 562)	**Direct Reflect.** (Fed. Ref. 141-6121)	**Contrast Ratio** (Fed. Test 141-4121)
Water Resistance (ASTM D1308)	**Dry times** (ASTM D 711)	**Color test** (595-33538 yellow)
Flexibility (Fed Test 141c-6223)		

Specification Reference

Standard Specification _____ **Supplemental Specification** _____

Project Specification _____ **Other** _____

Person Accepting Technical Responsibility

Name: _____ Title: _____

Fed. Test TT P 85E

Material #

Vendor #

Date Sampled

Destination Code

Material Quantity

Material Unit

Date Received

Batch #

C or M

Dates ----

State of Connecticut
Department of Transportation
Bureau of Engineering & Highways
Report of Test of White and Yellow Airport Solvent Based Paint
MAT 237 Rev. 9-03

Date

Laboratory No.

Project/ Sample No.

Viscosity 70 – 80 KU _____

Dry Time - 30 min. _____

Direct Reflectance 84% + _____

Color Visual match _____

Contrast Ratio White 0.90 + _____

Yellow 0.94 + _____

Flexibility NO Flaws _____

Water Resistance No Flaws _____

Person Performing Test (initials) :_____

Recommended For	**Remarks**

Director of Research and Materials

MAT-238 Waterborne Airport Paint

% Non Volatile (ASTM D 2697)	Fineness (ASTM D 1210)	Scrub Resistance (ASTM D 2486)	Freeze/Thaw (ASTM D 2243)
1_____ _____ 1 _____ 1_____(100) = 2 _____ _____ _____ _____(100) =	Dry times (ASTM D 711) % Pigment (ASTM D 3723) 1_____(100)= 2_____(100)= Avg._____ Avg._____	Color test (595-33538 yellow) Viscosity @ 77 (ASTM D 562) Wt/Gal @ 77 (ASTM D 1475) (X)(0.10) = lbs/gal cup – cup & sample = X Contrast Ratio (Fed.Test 141c-4121)	Direct Reflectance (ASTM E 97) Flexibility (Fed Test 141c-6223) Water Resistance (TT-P 1952 D)

Specification Reference

Standard Specification _____ **Supplemental Specification** _____

Project Specification _____ **Other** _____

Person Accepting Technical Responsibility

Name: _____ **Title:** _____

Fed. Spec. Paint TT – P – 1952D Traffic And Airfield Marking - Waterborne	State of Connecticut Department of Transportation Bureau of Engineering & Highways Report of Test of Waterborne Airport Paint MAT 238 Rev. 9-03	Date	Project/ Sample No.
Material #			
Vendor #		Laboratory No.	

Date Sampled	Viscosity	80 – 95 KU _____	Pigment	60 - 62%	_____
Destination Code	Direct reflectance	85 + _____	Freeze/Thaw	- 10KU	_____
Material Quantity	Flexibility	NO Flaws _____	Lead %	- 0.06%	_____
	Water Resistance	NO Flaws _____	Fineness	3.0 +	_____
Material Unit	Contrast Ratio	0.92 + _____	Color	6.0 CIELAB	_____
Date Received	Nonvolatile	60% + _____	Dry Time	- 10 min.	_____
Batch #	Scrub Resistance	500+ cyl. _____			
			Person Performing Test (initials) :_____		
C or M	Recommended For		Remarks		
Dates ----					

Director of Research and Materials

MAT-239 Fast Dry White & Yellow Waterborne Paint

% Non Volatile (ASTM D 2697)	% Pigment (ASTM D 3723)	Color test (595-33538 yellow)	Scrub Resist. (ASTM D 2486)
1_____ _____ _____ _____ (100) = 2_____ _____ _____ _____ (100) =	1_____(100)= 2_____(100)= Avg. _____	Flash Point (Ref. 200G)	Dry times (ASTM D 711)
		Flexibility (Fed Test 141c-6223)	Viscosity @ 77 (ASTM D 562)
		Contrast Ratio (Fed. Test 141c-4121)	
		Wt/Gal @ 77 (ASTM D 1475) (X)(0.10) = lbs/gal cup – cup & sample = X	

Specification Reference

Standard Specification _____ **Supplemental Specification** _____

Project Specification _____ **Other** _____

Person Accepting Technical Responsibility

Name: _____ Title: _____

Ref. File # 200F
White & Yellow 3 min. Fast Dry
Lead free, waterborne paint

State of Connecticut
Department of Transportation
Bureau of Engineering & Highways
Report of Fast Dry White & Yellow Waterborne Paint
MAT 239 Rev. 9-03

Date

Laboratory No.

Project/ Sample No.

Material #

Vendor #

Date Sampled

Destination Code

Material Quantity

Material Unit

Date Received

Batch #

C or M

Dates ----

Viscosity	**80 – 90 KU**	_____	**Pigment**	**58 - 63%**	_____
Flexibility	**NO Flaws**	_____	**Lead %**	**- 0.06%**	_____
Weight/Gal.	**12.5 +**	_____	**Dry Time**	**- 3 min.**	_____
Contrast Ratio	**0.96 +**	_____	**Color**	**Visual match**	_____
Nonvolatile	**76% +**	_____			
Flash Point	**100+**	_____			
Scrub Resistance	**800+ cyl.**	_____			

Person Performing Test (initials) :_____

Recommended For	Remarks

Director of Research and Materials

MAT-240 Regular Dry White & Yellow Waterborne Paint

% Non Volatile (ASTM D 2697)	% Pigment (ASTM D 3723)	Color test (595-13538 yellow)
1_____ _____ 2_____ _____ _____ _____ _____ (100) = _____ (100) =	1_____(100)= 2_____(100)=	Flexibility (Fed Test 141c-6223) Flash Point (Ref. 207B)
	Viscosity @ 77 (ASTM D 562)	Dry times (ASTM D 711)
Wt/Gal @ 77 (ASTM D 1475) (X)(0.10) = lbs/gal cup – cup & sample = X	Contrast Ratio (Fed.Test 141c-4121)	

Specification Reference

Standard Specification _____ **Supplemental Specification** _____

Project Specification _____ **Other** _____

Person Accepting Technical Responsibility

Name: _____ Title: _____

Ref. File # 207B White & Yellow 15min. Reg. Dry Lead free, waterborne paint	State of Connecticut Department of Transportation Bureau of Engineering & Highways Report of Test of Regular Dry White & Yellow Waterborne Paint MAT 240 Rev. 9-03	Date Laboratory No.	Project/ Sample No.

Material #

Vendor #

Date Sampled

Destination Code

Material Quantity

Material Unit

Date Received

Batch #

C or M

Dates ----

Viscosity	75 – 85 KU	_____	Pigment	50 - 60%	_____
Flexibility	NO Flaws	_____	Lead %	- 0.06%	_____
Weight/Gal.	12.5 +	_____	Freeze/Thaw	-10KU	_____
Contrast Ratio	0.96 +	_____	Color	Visual match	_____
Nonvolatile	70% +	_____	Dry Time	- 15 min.	_____
Flash Point	100+	_____			
Scrub Resistance	500+ cyl.	_____			

Person Performing Test (initials) : _____

Recommended For	Remarks

Director of Research and Materials

State of Connecticut Department of Transportation
Division of Materials Testing MAT 241
Independent Assurance Program Evaluation Report
Chemical Aggregate Section – Concrete Aggregates – Fine Aggregate

Purpose: This form is for evaluation of assurance testing of concrete aggregates. In accordance with the minimum requirements for testing, concrete aggregates are sampled and tested for acceptance purposes randomly on a bi-weekly basis, and assurance testing of these processes is required each ten tests. This assurance testing evaluates in-house (not directly related to the projects) sample reducing and gradation analysis of concrete aggregates tested at various satellite locations utilizing various equipment and personnel. See MAT 244 for assurance testing criteria.

Date of bi-weekly period requiring assurance testing:

Number of assurance tests performed	Number of assurance tests not meeting assurance criteria	Percentage of assurance tests not meeting assurance criteria	Was corrective action taken and noted for tests not meeting criteria?
District II Lab*			
District III Lab*			
District IV Lab*			
Totals for Concrete Aggregate Assurance Testing in the Period			

NOTES:_____
_____
_____
_____

* The District I Laboratory (Central Laboratory) tests all assurance samples provided by the Districts II, III, and IV Laboratories and is equally a part of the assurance testing program, including evaluations and determination of assignable cause for testing not meeting assurance testing criteria.

State of Connecticut Department of Transportation
Division of Materials Testing MAT 242
Independent Assurance Program Evaluation Report
Chemical Aggregate Section – Subbase and Processed Aggregate Base

Purpose: This form is for evaluation of assurance testing of Subbase and Processed Aggregate Base. In accordance with the minimum requirements for testing, roadbase aggregates are sampled and tested for acceptance and assurance processes. To meet project related minimum testing requirements, project personnel notify the District Laboratories for required acceptance and assurance testing of these materials. The process starts at the project site, where laboratory personnel witness and critique the sampling procedure at the site. Laboratory acceptance testing is then performed and split samples are sent to Central Laboratory for in-house (not directly related to the projects) assurance testing, which evaluates sample reducing and gradation analysis of the materials tested at various satellite locations utilizing various equipment and personnel. See MAT 244 for assurance testing criteria.

Date of assurance testing period (from/to):

Number of assurance tests performed	Number of assurance tests not meeting assurance criteria	Percentage of assurance tests not meeting assurance criteria	Was corrective action taken and noted for tests not meeting criteria?
District II Lab*			
District III Lab*			
District IV Lab*			
Totals for Subbase & Processed Aggregate Base Assurance Testing in the Period			

NOTES:_____
_____
_____
_____

* The District I Laboratory (Central Laboratory) tests all assurance samples provided by the Districts II, III, and IV Laboratories and is equally a part of the assurance testing program, including evaluations and determination of assignable cause for testing not meeting assurance testing criteria.

State of Connecticut Department of Transportation
Division of Materials Testing MAT 243
Independent Assurance Program Evaluation Report
Chemical Aggregate Section – Plastic PC Concrete

Purpose: This form is for evaluation of assurance testing of plastic PC concrete. In accordance with the minimum requirements for testing, plastic PC concrete is required to be sampled and tested by project personnel for required acceptance and assurance testing. Upon notification of the projects for required assurance testing, laboratory personnel evaluate the sampling and testing procedure, verify that adequate and calibrated testing equipment is utilized and readily available, (and verify use of qualified personnel for NHS projects). When requested, technical expertise is also provided to the project personnel during the subject assurance testing. Forms MAT 222 and MAT 224 (MAT 225 for metric projects) are required to be completed by laboratory personnel during the assurance testing, and if testing deficiencies are encountered they are noted. District offices are notified via memorandum of any found deficiencies. NOTE: This form does not evaluate the projects on an individual basis for conformance to minimum acceptance and assurance testing requirements as specified in the "Schedule of Minimum Requirements for Sampling Materials for Test". As stated above, this form is for evaluation of the assurance testing of plastic PC concrete. Percentages below are based on tests that were requested by the projects and that are on file at the Division of Materials Testing.

Date of assurance testing period:

Number of assurance tests performed	Number of assurance tests noting any testing deficiencies	Percentage of assurance tests noting testing deficiencies	Was the project notified via memorandum of any testing deficiencies?
District II Lab*			
District III Lab*			
District IV Lab*			
Totals for Plastic PC Concrete Assurance Testing in the Period			

NOTES:_____
_____
_____

Note: During the assurance test, District Laboratory personnel request a copy of the batch ticket representing the material delivered to the project site. For verification of producer submitted/DOT approved mix designs, batch weights are recorded and compared to approved mix designs on file at the Division of Materials Testing. Additionally, unit weights and volumetric calculations are performed during the assurance test as part of the mix design verification procedure.

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING AND HIGHWAY OPERATIONS
OFFICE OF RESEARCH AND MATERIALS
DIVISION OF MATERIALS TESTING MAT 244 Rev. 12-03

AGGREGATE ASSURANCE SAMPLES – VARIATION LIMITS

If assurance samples tested at the Central Laboratory vary from the samples tested at the District Laboratories by more than the percent shown below, the cause of the variations shall be investigated. These limits were derived from historical experience, along with engineering expertise.

NO. 4 AGGREGATE	NO. 6 AGGREGATE	NO. 67 AGGREGATE	NO. 8 AGGREGATE
37.5 mm (1 1/2") - 4.0	19.0 mm (3/4") - 4.0	19.0 mm (3/4") - 4.0	9.5 mm (3/8") - 5.0
25.0 mm (1") - 9.0	12.5 mm (1/2") - 6.0	9.5 mm (3/8") - 3.0	4.75 mm (#4) - 5.0
19.0 mm (3/4") - 6.0	9.5 mm (3/8") - 3.0	4.75 mm (#4) - 3.0	2.36 mm (#8) - 3.0
9.5 mm (3/8") - 3.0	4.75 mm (#4) - 3.0	2.36 mm (#8) - 3.0	1.18 mm (#16) - 3.0

CONCRETE SAND	SUBBASE	PROCESSED AGGREGATE BASE
4.75 mm (#4) - 3.0	37.5 mm (1 1/2") - 6.0	19.mm (3/4") - 6.0
2.36 mm (#8) - 6.0	6.3 mm (1/4") - 6.0	6.3 mm (1/4") - 6.0
1.18 mm (#16) - 10.0	2.0 mm (#10) – 6.0	425 µm (#40) - 5.0
600 µm (#30) - 10.0	425 µm (#40) - 5.0	150 µm (#100) -4.0
300 µm (#50) - 9.0	150 µm (#100) - 4.0	
150 µm (#100) - 4.0	75 µm (#200) - 3.0	
F.M. – 0.40 SILT – 1.5		

State of Connecticut Department of Transportation
Division of Materials Testing MAT 245
Independent Assurance Program Evaluation Report
Chemical Aggregate Section – Concrete Aggregates – Coarse Aggregate

Purpose: This form is for evaluation of assurance testing of concrete aggregates. In accordance with the minimum requirements for testing, concrete aggregates are sampled and tested for acceptance purposes randomly on a bi-weekly basis, and assurance testing of these processes is required each ten tests. This assurance testing evaluates in-house (not directly related to the projects) sample reducing and gradation analysis of concrete aggregates tested at various satellite locations utilizing various equipment and personnel. See MAT 244 for assurance testing criteria.

Date of bi-weekly period requiring assurance testing:

Number of assurance tests performed	Number of assurance tests not meeting assurance criteria	Percentage of assurance tests not meeting assurance criteria	Was corrective action taken and noted for tests not meeting criteria?
District II Lab*			
District III Lab*			
District IV Lab*			
Totals for Concrete Aggregate Assurance Testing in the Period			

NOTES:_____
_____
_____
_____

* The District I Laboratory (Central Laboratory) tests all assurance samples provided by the Districts II, III, and IV Laboratories and is equally a part of the assurance testing program, including evaluations and determination of assignable cause for testing not meeting assurance testing criteria.

CHLORIDE ANALYSIS OF BRIDGE DECKS

MAT-246

REV. 1/04

STATE OF CONNECTICUT

Department of Transportation

Division of Materials Testing

280 West Street , Rocky Hill CT 06067-3502

Sheet ______of ______

Laboratory No.

Bridge No.

Sample No. (a)	Total Chloride (b) (% by wgt.)	Total Chloride (c) (lbs/yd^3)	Soluble Chloride (% by wgt)	Soluble Chloride (lbs/yd^3)

(a) Sample locations are indicated on the attached plan sheets

(b) Procedure 1-1/2 inch diameter holes w ere drilled into the concrete deck using a rotary hammer w hich pulverized the concrete. Samples of the pulverized concrete representing a full coss-section of the holes w ere extrtacted at a depth of 1-1/2 inches.

(c) Based on average concrete unit w eight of 3920 lb/yd3 of 1.0 lb Chloride /yd3 of concrete equals 0.02555% total Cl.

(d) Suffix A designates sample for chloride analyses taken at approximately 4 inches below deck surface.

Core Number				End Point
Beaker Number		X		
		end point	factor	sample weight
		%	Total Cl.	lbs/yd^3
Core Number				End Point
Beaker Number		X		
		end point	factor	sample weight
		%	Total Cl.	lbs/yd^3
Core Number				End Point
Beaker Number		X		
		end point	factor	sample weight
		%	Total Cl.	lbs/yd^3
Core Number				End Point
Beaker Number		X		
		end point	factor	sample weight
		%	Total Cl.	lbs/yd^3